

REMARKS

Applicants' attorney would like to thank the Examiner for the telephone conversation on August 19, 2008, during which the Examiner's objection to the drawings was clarified, and the subject invention was explained.

The Examiner has objected to the drawings in that "the newly added limitations in the replacement drawing fig. 3 are not supported in the specification nor in fig. 3 originary [sic] presented, for example, the connections of the block (3rd set intermed. Signal (120)) and the block (2nd set input signal & 2 [sic] set HRTFS (110))."

Applicants submit that the Examiner is mistaken. In particular, the specification as originally filed, on page 12, lines 27-31, states "In step 100 - continuing the method description - for each signal in the second set of (input) sound signals, a weighted relation may be determined. Said weighted relation may comprise at least one signal from a third set of intermediate sound signals, such as L and R; CHI₁ and CHI₂, respectively (according to the two embodiments discussed) with corresponding weight values." In original Fig. 3, a flowchart was shown having empty boxes representing steps 100, 200 and 300. According to the specification, step 100 includes "determining a weighted relation" for each signal in the second set of (input) sound signals. In the Replacement drawing, Fig. 3 was amended to add the label "DET. WEIGHTED RELATIONS" to step 100, and to show the second set of input signals being applied to this step (from

new box 110) as well as the 3rd set of intermediate signals being applied to this block (from new box 120).

The specification as originally filed, on page 13, lines 12-16, states "In step 200, a first (newly generated) set of Head Related Transfer Functions may be determined. Said first set (of Head Related Transfer Functions) may be based on the second set of sound signals, i.e. the input sound signals, the second set of Head Related Transfer Functions (as discussed and used in the prior art) and the newly determined weighted relation(s)." As such, in the Replacement drawing, Fig. 3 was amended to add the label "DET. 1ST SET HRTF'S" to step 200. As indicated in the specification, this determination uses the determined weighted relation(s), this being shown in Fig. 3 by the step 100 outputting to the step 200; the 2nd set of input signals and the 2nd set of HRTF's. In Replacement Fig. 3, the supply of the 2nd set of input signals and the 2nd set of HRTF's is shown as an output line from the new box 110 to step 200.

Further, the specification as originally filed, on page 13, lines 25-28, states "In step 300, at least one signal from said third set of intermediate sound signals (L, R, CHI1, CHI2) may be transferred by means of at least one HRTF from said first set (of newly generated Head Related Transfer Functions) in order to generate at least one signal (as an output signal) belonging to said first set of output sound signals (HPL, HPR)." As such, in the Replacement drawing, Fig. 3 was amended to add the label "GEN. 1ST SET OUTPUT SIGNALS" to step 300. As indicated in the specification, this generating step uses the determined 1st HRTF's, this being

shown in Fig. 3 by the step 200 outputting to the step 300. In Replacement Fig. 3, the supply of the "at least one signal from said third set of intermediate sound signals" is shown as an output from the new box 120.

Hence, Applicants submit that while Fig. 3 did not originally show the boxes 110 and 120 and the outputs therefrom, the inclusion thereof is indeed supported in the specification as filed.

Claim 1 currently includes in the preamble, "A method of generating, in a media system, at least one output signal belonging to a first set of sound signals from at least one input signal belonging to a second set of sound signals having a related second set of Head Related Transfer Functions", while claim 7 currently includes in the preamble "A media system for generating at least one output signal belonging to a first set of sound signals from at least one input signal belonging to a second set of sound signals having a related second set of Head Related Transfer Functions".

The Examiner has now rejected claims 1-7 under 35 U.S.C. 112, paragraph 1, as failing to comply with the enablement requirement, in that "It is unclear to the examiner how CH1 and CH2 have a related second set of Head Related Transfer Functions."

Applicants submit that this is described in the specification as filed on page 5, lines 11-31, in which it is stated "...three channels (i.e. three input sound signals) CH1, CH2 and CH3 combine into a left HPL and a right PPR resulting (output) sound signal for the headphone. Said channels are each transmitted

by means of three related Head Related Transfer Functions...", to each of the outputs. As described on page 4, lines 14-15, HRTF's are filter functions with parameters or coefficients specific to a specific person. As such, the HRTF to be applied to a particular input signal is identified as being related to that particular input signal. Hence, in the claims the second set of Head Related Transfer Functions (e.g., 4-7 in Fig. 2) are related to the second set of sound signals (e.g., 1-2 in Fig. 2).

Applicants believe that the above explanation answers the Examiner's 35 U.S.C. 112, paragraph 1, rejection of the claims, and respectfully request withdrawal thereof.

The Examiner has rejected claims 1-7 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,990,205 to Chen.

The Chen patent discloses an apparatus and method for producing virtual acoustic sound, in which a head-related impulse response is used to describe sound signals in a spatial environment.

As noted in MPEP §2131, it is well-founded that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner states that Chen teaches "means (52) for determining for each signal in the second set of sound signals (42), a weighted (q) relation comprising at least one signal belong to a third set of intermediate sound signals (q1-qm) and at least one weight value (q)".

First, Applicants would like to point out that 52 in Fig. 4B refers to a bank of eigen filters q1-qm (see col. 11, line 65-68. Rather, elements 48 are weights W1L-WML. As such, using the Examiner's analogy, the outputs from the eigen filters q1-qM are the third set of intermediate sound signals, while the outputs 50 from the weights 48 are the second set of sound signals.

The Examiner then states that Chen teaches "means (42) for determining a first set of Head Related Transfer Functions based on the second set of sound signals (48 to the adder 26), the second set of Head Related Transfer Functions and the weighted relation".

Applicants believe that the Examiner is mistaken. In particular, Chen states "Then these M signals 58 are fed into two channels 42, each having a set of weights 48, representing the spatial characteristics of left and right HRIR, respectively" (col. 12, lines 2-5). This means that Chen forms a set of HRTF's (the Fourier transform of HRIR (see the subject specification on page 4, lines 1-7)), from the weighted relation and the second set of sound signals. However, there is no disclosure of additionally using a second set of HRTF's along with the weighted relation and the second set of sound signals to determine a first set of HRTF's.

In the subject specification as filed, this is described on page 11, lines 13-19, where the first set of HRTF's, i.e., H_1 and H_2 are shown.

In view of the above, Applicants believe that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, and as such, is patentable thereover.

Applicants believe that this application, containing claims 1-7, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

by /Edward W. Goodman/
Edward W. Goodman, Reg. 28,613
Attorney
Tel.: 914-333-9611